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REMARKS

Certain claims were rejected under 35 U.S.C. 102(b) as being anticipated and other claims were rejected under 35 U.S.C. 103(a) as being obvious. Applicant respectfully traverses the rejections and requests a withdrawal of all rejections for reasons set forth below.

I. Information Disclosure Statement

An Information Disclosure Statement is provided herewith including the publication date of the Mehra reference, previously lacking from the originally submitted Information Disclosure Statement. Applicant appreciates the courtesy extended by the Examiner in indicating the omission.

II. Specification

Applicants further wish to extend their gratitude to the Examiner for the courtesy of providing the guidelines for the arrangement of the specification. Applicant appreciates the suggestion that the headings not be bolded or underlined and will adhere to this guideline in future applications.

III. Claim Amendments

Claims 4 and 14 have been amended to more clearly set forth the added limitation of determining whether repeating delivery of the therapy at the first rate and repeating delivery of the therapy at the next rate have been repeated a predetermined number of times.

New claim 20 has been added. Written support for the new claim is found in paragraphs 57 through 59 on pages 20-21 of the Detailed Description and in the corresponding Figure 5.

IV. Claim Rejections – 35 USC § 112

Claim 10 stands rejected as being indefinite. Claim 10 has been amended to more clearly set forth the computer-readable medium having computer-

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executable instructions as the claimed subject matter. Applicant requests withdrawal of the rejection.

V. Claim Rejections – 35 USC § 102

Claims 1-5, 7, 9-15, 17 and 19 stand rejected under 35 U.S.C. 102(b) as being anticipated by Bornzin et al. (5,549,650, hereinafter "Bornzin"). Bornzin teaches a system and method for a pacemaker for using cardiac wall motion sensor signals to provide hemodynamically optimal pacing therapy to a patient at rest, and for providing rate-responsive pacing therapy. Bornzin discloses measuring the cardiac performance based on values of AV and HR for 512 beats (512 beats of data are collected, summed and averaged), (Col. 20, lines 58-61). Bornzin does not teach delivering a therapy at a first rate during a first time period and determining whether the therapy was delivered for a predetermined portion of the first time period, delivering a therapy at a next rate during a next time period and determining whether the therapy was delivered for a predetermined portion of the next time period. The Examiner's interpretation of Fig. 10, block 862, measuring cardiac performance for current values of AV and HR for 512 beats, as including the claimed feature of determining whether the therapy was delivered for a predetermined portion of the first time period is incorrect.

Bornzin does not specify whether the collection of 512 beats for an AV and HR is required to include consecutive beats, intrinsic beats, atrial-only paced beats, ventricular-only paced beats, or atrial and ventricular paced beats. With respect to the presently claimed invention, collection of 512 beats is not equivalent to delivering a pacing therapy for a time period and determining whether the therapy was delivered for a predetermined portion of the time period. The amount of time that the pacing therapy is actually delivered at a given rate during the time period will depend on the intrinsic heart rhythm. The number of beats occurring during the time period will depend on the intrinsic heart rate, the pacing therapy rate, and the portion of time that the pacing therapy is delivered.

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Accordingly, Bornzin does not teach the features of the claimed invention of delivering a therapy for a time period and determining if the therapy was delivered for a predetermined portion of the time period as specified in independent claims 1, 10 and 11.

Independent claim 1 and claims 2-5, 7 and 9 dependent thereon, independent claim 10, and independent claim 11 and claims 12-15, 17, and 19 dependent thereon are therefore patentably distinguishable from Bornzin. Applicant respectfully requests withdrawal of the rejections.

VI. Claim Rejections – 35 USC § 103

Claims 6 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bornzin in view of Mehra (6,185,495, hereinafter "Mehra"). As discussed above, Bornzin teaches a system and method for a pacemaker for using cardiac wall motion sensor signals to provide hemodynamically optimal pacing therapy to a patient at rest, and for providing rate-responsive pacing therapy. Bornzin does not teach or suggest determining whether a predetermined number of arrhythmia events are detected during a predetermined time interval prior to delivering the therapy at the first rate.

Mehra teaches a pacemaker that paces a patient's heart in a tachyarrhythmia prevention pacing mode for an extended time period, defines a metric of success of the tachyarrhythmia prevention pacing mode, monitors the metric over the extended time period and, responsive to the monitored metric, adjusts the tachyarrhythmia prevention pacing mode. Neither Bornzin nor Mehra, alone or in combination, teach or suggest delivering a therapy at a first rate during a first time period and determining if the therapy was delivered for a predetermined portion of the first time period and delivering the therapy at a next rate during a next time period and determining if the therapy was delivered for a predetermined portion of the next time period as specified in independent claims 1 and 11. Applicant respectfully traverses the rejection of dependent claims 6

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and 16 and asserts the claimed invention is patentably distinguishable from the cited references, alone or in combination.

Claims 8 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bornzin in view of Valikai et al. (5,948,005, hereinafter "Valikai"). Valikai discloses event/rate data gathered by an implantable pacemaker displayed in a histogram format as a function of heart rate and event type. Valikai teaches a heart rate histogram having multi-event bins that graphically convey event/rate data as a function of heart rate and event type. The multiple events include a paced event, a sensed event or a premature ventricular event (Col. 3, lines 1-5).

A heart rate histogram, however, does not correspond to determining parameter data corresponding to a weighted count of one of a number of arrhythmia events and a number of type of arrhythmia events wherein the parameter data is monitored in response to a therapy delivered during a time period to generate parameter data. Since the intrinsic heart rate may vary during the delivery of a pacing therapy at a first rate during a first time period and during a pacing therapy delivered at a next rate during a next time period, event/rate data stored in a heart rate histogram will not necessarily be stored according to a first therapy rate and first time period and a next therapy rate and next time period. On the contrary, event/rate data may be stored in the same heart rate bins during both the first time period and the next time period. As such, Valikai does not teach monitoring a parameter in response to the therapy delivered at the first rate to generate first parameter data and at the next rate to generate next parameter data.

Moreover, neither Bornzin or Valikai, combined or alone, teach or suggest delivering a therapy at a first rate during a first time period and determining if the therapy was delivered for a predetermined portion of the first time period and delivering the therapy at a next rate during a next time period and determining if the therapy was delivered for a predetermined portion of the next time period, as specified in independent claims 1, 10 and 11. Applicant respectfully traverses

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the rejection of dependent claims 8 and 18 and asserts the claimed invention is patentably distinguishable from the cited references, alone or in combination.

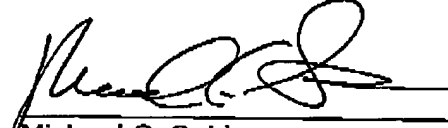
VII. Conclusion

Applicant asserts that the references fail to anticipate or render obvious the indicated claims. As such, Applicant respectfully asserts that the present claims are in condition for allowance and notice of the same is earnestly solicited.

Respectfully submitted,

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